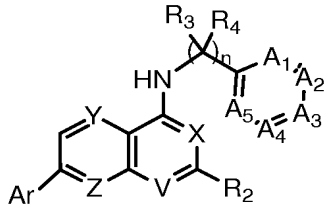
Amendments to the CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) halogen, nitro or cyano; or

(ii) a group of the formula $–R_x$-L-M-R_y, wherein:

R_x is C_1-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b;

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is:

(i) independently chosen from hydrogen, cyano and C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_8alkylsulfonyl, mono- and di-(C_1-C_8alkyl)aminosulfonyl, and mono- and di-(C_1-C_8alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino.

2. (Currently amended) A compound or salt according to claim 1, wherein Ar is phenyl or pyridyl, each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, COOH, aminocarbonyl, aminosulfonyl, cyano, nitro, C_1-C_4alkyl, C_2-C_4alkenyl~~C_1-C_4alkenyl~~, C_2-C_4alkynyl~~C_1-C_4alkynyl~~, haloC_1-C_4alkyl, C_1-C_4alkoxy, haloC_1-C_4alkoxy, C_1-C_4alkanoyl, C_1-C_4alkylsulfonyl, mono- and di-(C_1-C_4alkyl)aminosulfonyl, and mono- and di-(C_1-C_4alkyl)aminoC_0-C_4alkyl

3. (Currently amended) A compound or salt according to claim ~~2~~1, wherein Ar is phenyl or 2-pyridyl, each of which is substituted with from 1 to 3 substituents independently chosen from halogen, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy and haloC_1-C_6alkoxy.

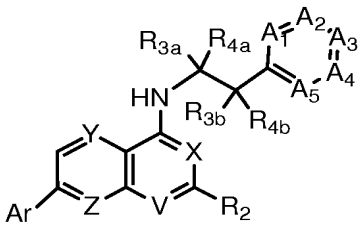
4. (Original) A compound or salt according to claim 3, wherein at least one substituent of Ar is located *ortho* to the point of attachment.

5. (Original) A compound or salt according to claim 4, wherein Ar is mono-substituted 2-pyridyl, wherein the substituent is halogen, trifluoromethyl or methyl.

6. (Currently amended) A compound or salt according to ~~any one of claims 1-5~~claim 1, wherein X and V are N.

7. (Original) A compound or salt according to claim 6, wherein Y is CH.

8. (Currently amended) A compound or salt according to ~~any one of claims 1-7~~claim 1, having the formula:



wherein:

R_{3a} is:

(i) hydrogen, cyano, methyl or ethyl;

(ii) taken together with R_{4a} to form an oxo group; or

(iii) taken together with R_{4a} or R_{3b} to form a 3- to 5-membered carbocycle;

R_{3b} is:

(i) hydrogen, cyano, methyl or ethyl;

(ii) taken together with R_{4b} to form an oxo group;

(iii) taken together with R_{4b} or R_{3a} to form a 3- to 5-membered carbocycle; or

(iv) taken together with A_1 to form a fused 5- to 7-membered carbocycle;

R_{4a} is:

(i) hydrogen, methyl or ethyl; or

(ii) taken together with R_{3a} to form an oxo group or a 3- to 5-membered carbocycle; and

R_{4b} is:

(i) hydrogen, methyl or ethyl; or

(ii) taken together with R_{3b} to form an oxo group or a 3- to 5-membered carbocycle.

9. (Original) A compound or salt according to claim 8, wherein each of R_{3a}, R_{3b}, R_{4a} and R_{4b} is hydrogen.

10. (Original) A compound or salt according to claim 8, wherein R_{3a}, R_{4a} and R_{4b} are hydrogen, and R_{3b} is methyl or taken together with A_1 to form a fused cyclopentyl group.

11. (Original) A compound or salt according to claim 8, wherein either:

R_{3a} and R_{4a} are taken together to form an oxo group, and R_{3b} and R_{4b} are both hydrogen; or

R_{3b} and R_{4b} are taken together to form an oxo group, and R_{3a} and R_{4a} are both hydrogen.

12. (Currently amended) A compound or salt according to ~~any one of claims 1-11~~claim 1, wherein:

A_1 is CR_a, or A_1 is taken together with a R_3 group to form a fused cyclopentyl or cyclohexyl group;

A_2, A_3 and A_4 are independently CR_a;

A_5 is N or CR_a; and

R_a is independently chosen at each occurrence from hydrogen, halogen, cyano, C_1-C_6alkyl, (C_3-C_8cycloalkyl)C_0-C_4alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy, C_2-C_4alkyl ether, C_1-C_4alkanoyl, C_1-C_6alkylsulfonyl, aminosulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl.

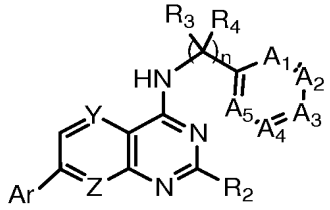
13. (Original) A compound or salt according to claim 12, wherein at least one R_a is not hydrogen.

14. (Original) A compound or salt according to claim 13, wherein R_a is independently chosen at each occurrence from hydrogen, halogen, cyano, methyl, ethyl, trifluoromethyl, methoxy and ethoxy.

15. (Currently amended) A compound or salt according to ~~any one of claims 1-14~~claim 1, wherein R_2 is C_1-C_6alkyl, C_2-C_6alkenyl~~C_1-C_6alkenyl~~, C_2-C_6alkyl ether, mono- or di-(C_1-C_6alkyl)aminoC_1-C_6alkyl, mono- or di-(C_2-C_6alkenyl~~C_1-C_6alkenyl~~)aminoC_1-C_6alkyl, (C_4-C_{10}carbocycle)C_1-C_6alkyl, (4- to 10-membered heterocycle)C_1-C_6alkyl, mono- or di-(C_1-C_6alkyl)aminoC_2-C_6alkyl ether, (C_4-C_{10}carbocycle)C_2-C_6alkyl ether or (4- to 10-membered heterocycle)C_2-C_6alkyl ether, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C_1-C_4alkyl and haloC_1-C_4alkyl.

16. (Currently amended) A compound or salt according to claim 15, wherein R_2 is C_2-C_6alkyl ether, mono- or di-(C_1-C_6alkyl)aminoC_1-C_4alkyl, mono- or di-(C_2-C_6alkenyl~~C_1-C_6alkenyl~~)aminoC_1-C_6alkyl, or (4- to 10-membered heterocycloalkyl)C_1-C_4alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C_1-C_4alkyl and haloC_1-C_4alkyl.

17. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Y and Z are each independently N or CR_1;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered

carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 1 to 3 substituents independently selected from:

(i) hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_8alkylsulfonyl, mono- and di-(C_1-C_8alkyl)aminosulfonyl, and mono- and di-(C_1-C_8alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_8alkylsulfonyl, mono- and di-(C_1-C_8alkyl)aminosulfonyl, and mono- and di-(C_1-C_8alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino.

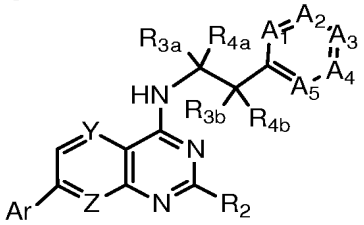
18. (Currently amended) A compound or salt according to claim 17, wherein Ar is phenyl or pyridyl, each of which is substituted with from 1 to 3 substituents independently chosen from hydroxy, halogen, amino, COOH, aminocarbonyl, aminosulfonyl, cyano, nitro, C_1-C_4alkyl, C_2-C_4alkenyl~~C_1-C_4alkenyl~~, C_2-C_4alkynyl~~C_1-C_4alkynyl~~, haloC_1-C_4alkyl, haloC_1-C_4alkoxy, C_1-C_4alkanoyl, C_1-C_4alkylsulfonyl, mono- and di-(C_1-C_4alkyl)aminosulfonyl, and mono- and di-(C_1-C_4alkyl)aminoC_0-C_4alkyl.

19. (Original) A compound or salt according to claim 18, wherein at least one substituent of Ar is located *ortho* to the point of attachment.

20. (Original) A compound or salt according to claim 19, wherein Ar is mono-substituted 2-pyridyl, wherein the substituent is halogen, trifluoromethyl or methyl.

21. (Currently amended) A compound or salt according to ~~any one of claims 17-20~~claim 17, wherein Y is CH.

22. (Currently amended) A compound or salt according to ~~any one of claims 17-21~~claim 17, having the formula:



wherein:

R_{3a} is:

(i) hydrogen, cyano, methyl or ethyl;

(ii) taken together with R_{4a} to form an oxo group; or

(iii) taken together with R_{4a} or R_{3b} to form a 3- to 5-membered carbocycle;

R_{3b} is:

(i) hydrogen, cyano, methyl or ethyl;

(ii) taken together with R_{4b} to form an oxo group;

(iii) taken together with R_{4b} or R_{3a} to form a 3- to 5-membered carbocycle; or

(iv) taken together with A_1 to form a fused 5- to 7-membered carbocycle;

R_{4a} is:

(i) hydrogen, methyl or ethyl; or

(ii) taken together with R_{3a} to form an oxo group or a 3- to 5-membered carbocycle; and

R_{4b} is:

(i) hydrogen, methyl or ethyl; or

(ii) taken together with R_{3b} to form an oxo group or a 3- to 5-membered carbocycle.

23. (Original) A compound or salt according to claim 22, wherein each of R_{3a}, R_{3b}, R_{4a} and R_{4b} is hydrogen.

24. (Original) A compound or salt according to claim 22, wherein R_{3a}, R_{4a} and R_{4b} are hydrogen, and R_{3b} is methyl or taken together with A_1 to form a fused cyclopentyl group.

25. (Original) A compound or salt according to claim 22, wherein either:

R_{3a} and R_{4a} are taken together to form an oxo group, and R_{3b} and R_{4b} are both hydrogen; or

R_{3b} and R_{4b} are taken together to form an oxo group, and R_{3a} and R_{4a} are both hydrogen.

26. (Currently amended) A compound or salt according to ~~any one of claims 17-25~~claim 17, wherein:

A_1 is CR_a, or A_1 is taken together with a R_3 group to form a fused cyclopentyl or cyclohexyl group;

A_2, A_3 and A_4 are independently CR_a;

A_5 is N or CR_a; and

R_a is independently chosen at each occurrence from hydrogen, halogen, cyano, C_1-C_6alkyl, (C_3-C_8cycloalkyl)C_0-C_4alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy, C_2-C_4alkyl ether, C_1-C_4alkanoyl, C_1-C_6alkylsulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl.

27. (Original) A compound or salt according to claim 26, wherein at least one R_a is not hydrogen.

28. (Original) A compound or salt according to claim 27, wherein R_a is independently chosen at each occurrence from hydrogen, halogen, cyano, methyl, ethyl, trifluoromethyl, methoxy and ethoxy.

29. (Currently amended) A compound or salt according to ~~any one of claims 17-28~~claim 17, wherein R_2 is:

(i) halogen, nitro or cyano; or
(ii) a group of the formula $-R_x$-L-M-R_y, wherein:
R_x is C_1-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), $(C=O)_pN(R_z)$ or $N(R_z)(C=O)_p$, wherein p is 0 or 1;

M is a single covalent bond or C_1-C_8alkylene that substituted with from 0 to 4 substituents independently selected from R_b;

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 4 substituents independently selected from R_b; or

(c) taken together with R_z to form a 4- to 10-membered heterocycle that is substituted with from 0 to 4 substituents independently selected from R_b; and

R_z is:

(a) hydrogen;

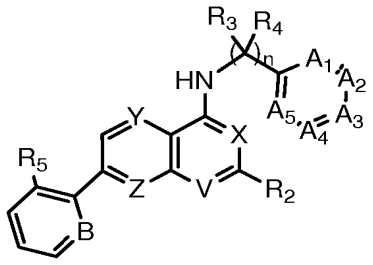
(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 4 substituents independently selected from R_b; or

(c) taken together with R_y to form a 4- to 10-membered heterocycle that is substituted with from 0 to 4 substituents independently selected from R_b.

30. (Currently amended) A compound or salt according to ~~any one of claims 17-28~~claim 17, wherein R_2 is hydrogen, C_1-C_6alkyl, C_2-C_6alkenyl~~C_1-C_6alkenyl~~, C_2-C_6alkyl ether, mono- or di-(C_1-C_6alkyl)aminoC_1-C_6alkyl, mono- or di-(C_2-C_6alkenyl~~C_1-C_6alkenyl~~)aminoC_1-C_6alkyl, (C_4-C_{10} carbocycle)C_1-C_6alkyl, (4- to 10-membered heterocycle)C_1-C_6alkyl, mono- or di-(C_1-C_6alkyl)aminoC_2-C_6alkyl ether, (C_4-C_{10} carbocycle)C_2-C_6alkyl ether, or (4- to 10-membered heterocycle)C_2-C_6alkyl ether, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C_1-C_4alkyl and haloC_1-C_4alkyl.

31. (Currently amended) A compound or salt according to claim 30, wherein R_2 is C_2-C_6alkyl ether, mono- or di-(C_1-C_6alkyl)aminoC_1-C_4alkyl, mono- or di-(C2-C6alkenylC1-C6alkenyl)aminoC_1-C_6alkyl, or (4- to 10-membered heterocycloalkyl)C_1-C_4alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C_1-C_4alkyl and haloC_1-C_4alkyl.

32. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

B is CH or N;

R_5 is hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro, C_1-C_4alkyl, C2-C4alkenylC1-C4alkenyl, C2-C4alkynylC1-C4alkynyl, haloC_1-C_4alkyl, C_1-C_4alkoxy, haloC_1-C_4alkoxy, C_1-C_4alkanoyl, C_1-C_4alkylsulfonyl, mono- and di-(C_1-C_4alkyl)aminosulfonyl, and mono- and di-(C_1-C_4alkyl)aminoC_0-C_4alkyl;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

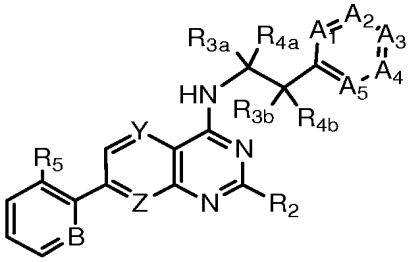
(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino.

33. (Original) A compound or salt according to claim 32, wherein R_5 is halogen, trifluoromethyl or methyl.

34. (Currently amended) A compound or salt according to claim 32~~ or claim 33~~, wherein X and V are N.

35. (Original) A compound or salt according to claim 34, wherein Y is CH.

36. (Currently amended) A compound or salt according to ~~any one of claims 32-35~~claim 32, having the formula:



wherein:

R_{3a} is:

(i) hydrogen, cyano, methyl or ethyl;

(ii) taken together with R_{4a} to form an oxo group; or

(iii) taken together with R_{4a} or R_{3b} to form a 3- to 5-membered carbocycle;

R_{3b} is:

(i) hydrogen, cyano, methyl or ethyl;

(ii) taken together with R_{4b} to form an oxo group;

(iii) taken together with R_{4b} or R_{3a} to form a 3- to 5-membered carbocycle; or

(iv) taken together with A_1 to form a fused 5- to 7-membered carbocycle;

R_{4a} is:

(i) hydrogen, methyl or ethyl; or

(ii) taken together with R_{3a} to form an oxo group or a 3- to 5-membered carbocycle; and

R_{4b} is:

(i) hydrogen, methyl or ethyl; or

(ii) taken together with R_{3b} to form an oxo group or a 3- to 5-membered carbocycle.

37. (Original) A compound or salt according to claim 36, wherein each of R_{3a}, R_{3b}, R_{4a} and R_{4b} is hydrogen.

38. (Original) A compound or salt according to claim 36, wherein R_{3a}, R_{4a} and R_{4b} are hydrogen, and R_{3b} is methyl or taken together with A_1 to form a fused cyclopentyl group.

39. (Original) A compound or salt according to claim 36, wherein either:

R_{3a} and R_{4a} are taken together to form an oxo group, and R_{3b} and R_{4b} are both hydrogen; or

R_{3b} and R_{4b} are taken together to form an oxo group, and R_{3a} and R_{4a} are both hydrogen.

40. (Currently amended) A compound or salt according to ~~any one of claims 32-39~~claim 32, wherein:

A_1 is CR_a, or A_1 is taken together with a R_3 group to form a fused cyclopentyl or cyclohexyl group;

A_2, A_3 and A_4 are independently CR_a;

A_5 is N or CR_a; and

R_a is independently chosen at each occurrence from hydrogen, halogen, cyano, C_1-C_6alkyl, (C_3-C_8cycloalkyl)C_0-C_4alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy, C_2-C_4alkyl ether, C_1-C_4alkanoyl, C_1-C_6alkylsulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl.

41. (Original) A compound or salt according to claim 40, wherein at least one R_a is not hydrogen.

42. (Original) A compound or salt according to claim 41, wherein R_a is independently chosen at each occurrence from hydrogen, halogen, cyano, methyl, ethyl, trifluoromethyl, methoxy and ethoxy.

43. (Currently amended) A compound or salt according to ~~any one of claims 32-42~~claim 32, wherein R_2 is:

(i) halogen, nitro or cyano; or
(ii) a group of the formula $-R_x$-L-M-R_y, wherein:
R_x is C_1-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), $(C=O)_pN(R_z)$ or $N(R_z)(C=O)_p$, wherein p is 0 or 1;

M is a single covalent bond or C_1-C_8alkylene that substituted with from 0 to 4 substituents independently selected from R_b;

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 4 substituents independently selected from R_b; or

(c) taken together with R_z to form a 4- to 10-membered heterocycle that is substituted with from 0 to 4 substituents independently selected from R_b; and

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 4 substituents independently selected from R_b; or

(c) taken together with R_y to form a 4- to 10-membered heterocycle that is substituted with from 0 to 4 substituents independently selected from R_b.

44. (Currently amended) A compound or salt according to ~~any one of claims 32-42~~claim 32, wherein R_2 is hydrogen, C_1-C_6alkyl, C_2-C_6alkenyl~~C_1-C_6alkenyl~~, C_2-C_6alkyl ether, mono- or di-(C_1-C_6alkyl)aminoC_1-C_6alkyl, mono- or di-(C_2-C_6alkenyl~~C_1-C_6alkenyl~~)aminoC_1-C_6alkyl, (C_4-C_{10} carbocycle)C_1-C_6alkyl, (4- to 10-membered heterocycle)C_1-C_6alkyl, mono- or di-(C_1-C_6alkyl)aminoC_2-C_6alkyl ether, (C_4-C_{10}

carbocycle)C_2-C_6alkyl ether, or (4- to 10-membered heterocycle)C_2-C_6alkyl ether, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C_1-C_4alkyl and haloC_1-C_4alkyl.

45. (Original) A compound or salt according to claim 44, wherein R_2 is C_2-C_6alkyl ether, mono- or di-(C_1-C_6alkyl)aminoC_1-C_4alkyl, mono- or di-(C$_2$-C$_6$alkenyl~~C$_1$-C$_6$alkenyl~~)aminoC_1-C_6alkyl, or (4- to 10-membered heterocycloalkyl)C_1-C_4alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C_1-C_4alkyl and haloC_1-C_4alkyl.

46. (Currently amended) A compound or salt according to ~~any one of claims 1-45~~claim 1, wherein the compound exhibits no detectable agonist activity an *in vitro* assay of capsaicin receptor agonism.

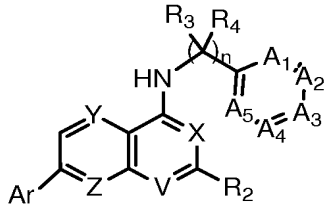
47. (Currently amended) A compound or salt according to ~~any one of claims 1-45~~claim 1, wherein the compound has an IC_{50} value of 100 nanomolar or less in a capsaicin receptor calcium mobilization assay.

48. (Cancelled)

49. (Currently amended) A pharmaceutical composition, comprising at least one compound or salt according to ~~any one of claims 1-45~~claim 1, in combination with a physiologically acceptable carrier or excipient.

50. (Original) A pharmaceutical composition according to claim 49 wherein the composition is formulated as an injectible fluid, an aerosol, a cream, a gel, a pill, a capsule, a syrup or a transdermal patch.

51. (Currently amended) A method for reducing calcium conductance of a cellular capsaicin receptor, comprising contacting a cell expressing a capsaicin receptor with at least one compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, <u>C_2-C_8alkenyl</u> ~~C_1-C_8alkenyl~~ or <u>C_2-C_8alkynyl</u>~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, <u>C_3-C_8alkanone</u>~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle,

each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

and thereby reducing calcium conductance of the capsaicin receptor.

52. (Currently amended) A method according to claim 51, wherein the compound is a compound according to claim 1 ~~any one of claims 1-45~~.

53. (Original) A method according to claim 51, wherein the cell is contacted *in vivo* in an animal.

54. (Original) A method according to claim 53, wherein the cell is a neuronal cell.

55. (Original) A method according to claim 53, wherein the cell is a urothelial cell.

56. (Original) A method according to claim 55, wherein during contact the compound is present within a body fluid of the animal.

57. (Original) A method according to claim 56, wherein the compound is present in the blood of the animal at a concentration of 1 micromolar or less.

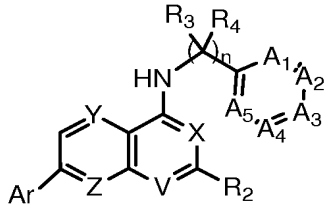
58. – 59. (Cancelled)

60. (Original) A method according to claim 53, wherein the animal is a human.

61. (Original) A method according to claim 53, wherein the compound is administered orally.

62. – 67. (Cancelled)

68. (Currently amended) A method for treating a condition responsive to capsaicin receptor modulation in a patient, comprising administering to the patient a therapeutically effective amount~~effectiveamount~~ of at least one compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

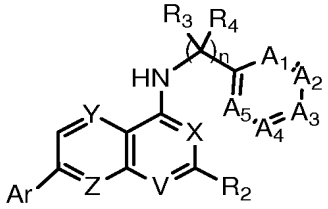
and thereby alleviating the condition in the patient.

69. (Currently amended) A method according to claim 68, wherein the compound is a compound according to claim 1 ~~any one of claims 1-45~~.

70. (Original) A method according to claim 68, wherein the patient is suffering from (i) exposure to capsaicin, (ii) burn or irritation due to exposure to heat, (iii) burns or irritation due to exposure to light, (iv) burn, bronchoconstriction or irritation due to exposure to tear gas, air pollutants or pepper spray, or (v) burn or irritation due to exposure to acid.

71. (Original) A method according to claim 68, wherein the condition is asthma or chronic obstructive pulmonary disease.

72. (Currently amended) A method for treating pain in a patient, comprising administering to a patient suffering from pain a therapeutically ~~effectiveamount~~ effective amount of at least one compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~,

C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen

from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

and thereby alleviating pain in the patient.

73. (Currently amended) A method according to claim 72, wherein the compound is a compound according to claim 1 ~~any one of claims 1-45~~.

74. A method according to claim 72, wherein the compound is present in the blood of the patient at a concentration of 1 micromolar or less.

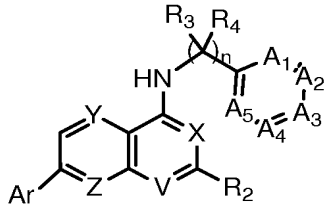
75. – 76. (Cancelled)

77. (Original) A method according to claim 72, wherein the patient is suffering from neuropathic pain.

78. (Original) A method according to claim 72, wherein the pain is associated with a condition selected from: postmastectomy pain syndrome, stump pain, phantom limb pain, oral neuropathic pain, toothache, postherpetic neuralgia, diabetic neuropathy, reflex sympathetic dystrophy, trigeminal neuralgia, osteoarthritis, rheumatoid arthritis, fibromyalgia, Guillain-Barre syndrome, meralgia paresthetica, burning-mouth syndrome, bilateral peripheral neuropathy, causalgia, neuritis, neuronitis, neuralgia, AIDS-related neuropathy, MS-related neuropathy, spinal cord injury-related pain, surgery-related pain, musculoskeletal pain, back pain, headache, migraine, angina, labor, hemorrhoids, dyspepsia, Charcot's pains, intestinal gas, menstruation, cancer, venom exposure, irritable bowel syndrome, inflammatory bowel disease and trauma.

79. (Original) A method according to claim 72, wherein the patient is a human.

80. (Currently amended) A method for treating itch in a patient, comprising administering to a patient a therapeutically effective amount~~effectiveamount~~ of a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle,

each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

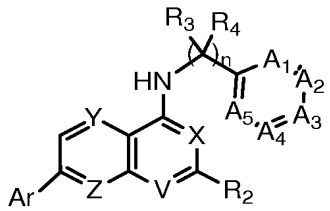
(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

and thereby alleviating itch in the patient.

81. (Currently amended) A method according to claim 80, wherein the compound is a compound according to claim 1 ~~any one of claims 1-45~~.

82. (Currently amended) A method for treating cough or hiccup in a patient, comprising administering to a patient a therapeutically effectiveamount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $–R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

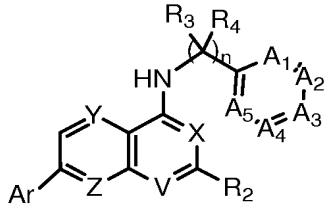
(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono-

and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

and thereby alleviating cough or hiccup in the patient.

83. (Currently amended) A method according to claim 82, wherein the compound is a compound according to claim 1 ~~any one of claims 1-45~~.

84. (Currently amended) A method for treating urinary incontinence or overactive bladder in a patient, comprising administering to a patient a therapeutically effectiveamount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

V, X, Y and Z are each independently N or CR_1, such that at least one of V and X is N;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, amino, C_1-C_6alkyl, haloC_1-C_6alkyl, C_1-C_6alkoxy, haloC_1-C_6alkoxy and mono- and di-(C_1-C_6alkyl)amino;

R_2 is:

(i) hydrogen, halogen, nitro or cyano; or

(ii) a group of the formula $-R_x$-L-M-R_y, wherein:

R_x is C_0-C_3alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO_2, $(C=O)_pN(R_z)$, $N(R_z)(C=O)_p$, $SO_2N(R_z)$ or $N(R_z)SO_2$, wherein p is 0 or 1;

M is a single covalent bond, C_1-C_8alkyl, C_2-C_8alkenyl ~~C_1-C_8alkenyl~~ or C_2-C_8alkynyl~~C_1-C_8alkynyl~~, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkoxy, (C_1-C_8alkyl)aminoC_0-C_8alkyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

(a) hydrogen;

(b) C_1-C_8alkyl, C_2-C_8alkenyl, C_2-C_8alkynyl, C_1-C_8alkanoyl, C_3-C_8alkanone~~C_2-C_8alkanone~~, C_2-C_8alkyl ether, or a 4- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

n is 1, 2 or 3;

Each R_3 is independently:

(i) chosen from hydrogen, cyano and C_1-C_4alkyl that is substituted with from 0 to 3 substituents independently chosen from halogen, cyano and hydroxy;

(ii) taken together with R_4 attached to the same carbon atom to form an oxo group;

(iii) taken together with R_4 attached to the same carbon atom to form a 3- to 6-membered carbocycle or heterocycle;

(iv) taken together with a second R_3 group to form a 3- to 7-membered carbocycle; or

(v) taken together with A_1 to form a fused 5- to 7-membered carbocycle or heterocycle;

wherein each of (iii), (iv) and (v) is substituted with from 0 to 3 substituents independently chosen from halogen, cyano, hydroxy, C_1-C_4alkyl and haloC_1-C_4alkyl;

Each R_4 is independently:

(i) hydrogen, cyano or C_1-C_4alkyl; or

(ii) taken together with R_3 attached to the same carbon atom to form an oxo group or an optionally substituted 3- to 6-membered carbocycle or heterocycle;

Ar is a 5- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 3 substituents independently selected from R_b;

A_1 is N or CR_a, or A_1 is taken together with a R_3 group to form an optionally substituted, fused, 5- to 7-membered carbocycle or heterocycle;

A_2, A_3, A_4 and A_5 are independently N or CR_a;

R_a is independently chosen at each occurrence from hydrogen, R_b and groups that are taken together with an adjacent R_a to form a fused 5- or 6-membered carbocyclic or heterocyclic ring that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and –COOH; and

(ii) C_1-C_8alkyl, C_2-C_8alkenyl~~C_1-C_8alkenyl~~, C_2-C_8alkynyl~~C_1-C_8alkynyl~~, haloC_1-C_8alkyl, C_1-C_8alkoxy, haloC_1-C_8alkoxy, C_1-C_8alkanoyl, C_3-C_8alkanone, C_1-C_8alkanoyloxy, C_1-C_8alkylthio, C_2-C_8alkyl ether, C_1-C_4alkoxycarbonyl, C_1-C_6alkylsulfonyl, mono- and di-(C_1-C_6alkyl)aminosulfonyl, and mono- and di-(C_1-C_6alkyl)aminoC_0-C_4alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C_1-C_4alkyl, C_1-C_4alkoxy, hydroxyC_1-C_4alkyl, haloC_1-C_4alkyl, and mono- and di-(C_1-C_4alkyl)amino;

and thereby alleviating urinary incontinence or overactive bladder in the patient.

85. (Currently amended) A method according to claim 84, wherein the compound is a compound according to claim 1~~ any one of claims 1-45~~.

86. – 88. (Cancelled)

89. (Currently amended) A method for determining the presence or absence of capsaicin receptor in a sample, comprising the steps of:

(a) contacting a sample with a compound or salt according to ~~any one of claims 1-45~~claim 1, under conditions that permit binding of the compound to capsaicin receptor; and

(b) detecting a level of the compound bound to capsaicin receptor, and therefrom determining the presence or absence of capsaicin receptor in the sample.

90. (Cancelled)

91. (Original) A packaged pharmaceutical preparation, comprising:

(a) a pharmaceutical composition according to claim 49 in a container; and

(b) instructions for using the composition to treat pain.

92. (Original) A packaged pharmaceutical preparation, comprising:

(a) a pharmaceutical composition according to claim 49 in a container; and

(b) instructions for using the composition to treat cough or hiccup.

93. (Cancelled)

94. (Original) A packaged pharmaceutical preparation, comprising:

(a) a pharmaceutical composition according to claim 49 in a container; and

(b) instructions for using the composition to treat urinary incontinence or overactive bladder.

95. – 96. (Cancelled)